

# DESIGN OF DATA COLLECTION SYSTEM OF LECTURER'S RESEARCH AT INSTITUTE INFORMATICS AND BUSINESS DARMAJAYA LAMPUNG

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## Abstract

In order to spur the quantity and quality of research is one of the basic tasks of the lecturer, Institute Informatics and Business Darmajaya Lampung facilitate the professors to be able to participate in a range of grants to help financing research lecturer. With a growing number of studies professors proposed then it should be when logging the lecturer research done in a better. Utilization of information technology is the right information to perform data management information can be either information related to it or also as tool of checking data in order to reduce plagiarism practices and publishing redundancy title research

**Keywords:** Information Systems, Information Technology, plagiarism and title redundancy

## 1.0 INTRODUCTION

### 1.1.

In order to spur the quantity and quality of research is one of the basic tasks of the lecturer, Institute Informatics And Business Darmajaya Lampung facilitate the professors to be able to participate in a range of grants to help financing research lecturer. With a growing number of studies professors proposed then it should be when logging the lecturer research done in a better. Utilization of information technology is the right information to perform data management information can be either information related to it or also as tool of checking data in order to reduce plagiarism practices and publishing redundancy title research. How to build Design of Data Collection System of Lecturer's Research at Institute Informatics and Business Darmajaya Lampung. Scope of identification-identification of the needs of the logging information system design Research Professor at the Institute Informatics and Business Darmajaya Lampung limited with checking or validation of titles for researchers, for which the validation of the results can be determined whether the title research the lecturer was accepted or rejected

### 1.2. Objectives and benefits research

1. The purpose of this research is as a medium of delivery of information as well as media logging and anticipation of cheating may happen
2. As a basis for checking/validation of the beginning of each title basic checking/validation research as the beginning of each title research

## 2.0 THEORETICAL

### 2.1. System development methodology

Tata Sutabri (2012) system is a group of elements that are closely related to each other, which function together to achieve certain goals. Jogiyanto (2005). System is a collection of human and capital resources within an organization responsible for collecting and processing data to produce useful information for all levels of management in planning and control activities. The data to be processed into information is usually stored in a database (database). Adi Nugroho (2012) the database is defined as a collection of data organized in such a way that the data is easily stored and manipulated. One of the most frequently used methods in information systems development is structured analysis and design (Structured Analysis and Design / SSAD).

The design on this method aims to create a solution model to the problem that has been modeled completely in the structured analysis phase. There are four design activities that must be done, namely:

1. Architectural design.
2. Data design.
3. Interface design.
4. procedural design.
5. One of the common tools used to create a system model is and data flow diagram / DFD

Entity relationship diagram / ERD and normalization techniques are tools commonly used for data modeling. (Jogiyanto, 2005).

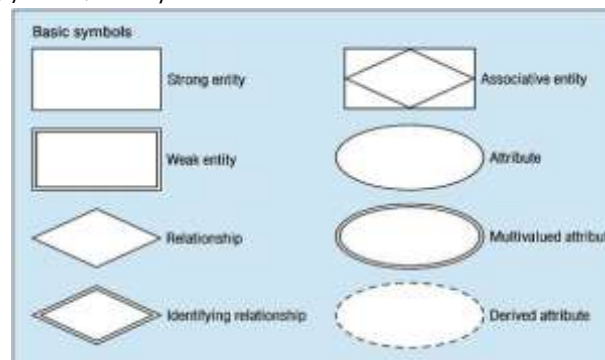


Figure 1 ERD Symbols

## 3.0 METHODOLOGY

System development methodology used in this study is structured analysis and design methodology. While the approach of development of system used, among other things:

1. Structured approach, where the process of analysis or design done by using tools and techniques that are adequate to support the process of developing the system in every converted
2. The Top-down Approach, where systems development starting from the formulation of the information or the system-generated output, then conducted data collection-supporting data as needed.
3. Approach Module, where systems development done gradually so that the module per module complex systems can still be completed within the resource limitations that exist.
4. Systems approach, where the system is viewed as a single entity is integrated for each activity or application. This approach emphasizes the achievement of overall objectives to organization and not only on the target system developed only.

## 4.0 RESULTANTS AND DISCUSSION

In order to improve the performance of the system running it required the development of the system by utilizing information technology as a support implementation of existing business processes. Here is the proposed model of Research Data Collection System, displayed in the form of context diagrams and data flow diagrams

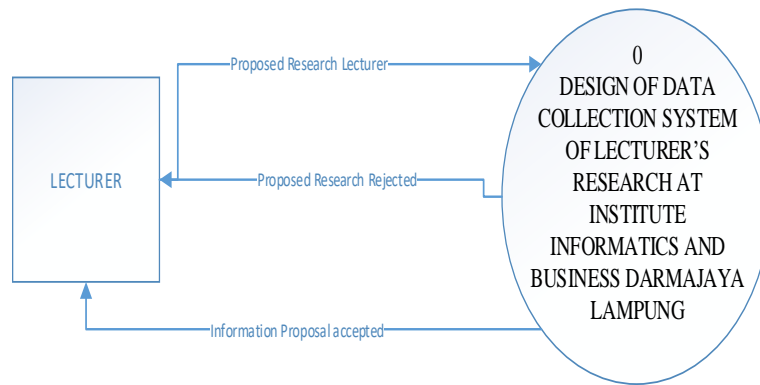


Figure 2. context diagram of the proposed system

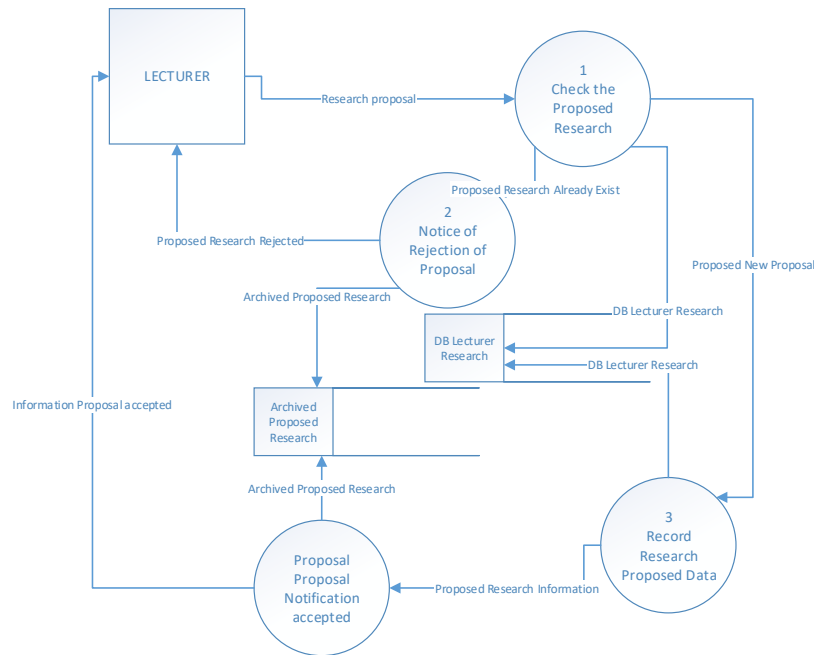


Figure 3. data flow diagram of 0 system level proposed

The main output design generated by the system in order to support the process of data management research lecturer can be seen in the existing picture

LIST OF RESEARCH OBJECT / PLACE			
Object / Place of Research		<input type="text"/> <input type="button" value="Check Research Data"/>	
No	Research Title	NIDN	Researchers

Figure 4. list of research lecturer per object / place of research

LIST OF RESEARCH PER FOCUS

Research focus

Check Research Data

No	Research Title	NIDN	Researchers

Figure 5. list of lecturers research by research focus

LIST OF RESEARCH BASED ON METHODS

Research methods

Check Research Data

No	Research Title	NIDN	Researchers

Figure 6. list of research lecturers per research method

The design of the main input form required in the proposed system can be seen in Figures 7, 10, 11 and 12

FORM INPUT GRANT DATA TYPES

Grant Code

Type of Grant

Save

Edit

Delete

Figure 7. Grant type data input form

**DATA INPUT FORM OF SCIENCE**

**Science Code**

**Science**

Save

Edit

Delete

Figure 8. Science input field form

**FORM INPUT DATA RESEARCH DATA**

**NIDN**

**Name of Lecturer (Lead Researcher)**

**Science**  ▼

**Academic Level**  ▼

**Research Title** 

Check

**Fokus Penelitian** 

Check

**Object of research** 

Check

**Research methods** 

Check

**Type of Grant**  ▼

**Period**

**No.Registration**

Save

Edit

Delete

Figure 13. Research input form lecturer

In order to accommodate all input data and generate all information that is output from the proposed information system, here is the design of the database structure required to support the system

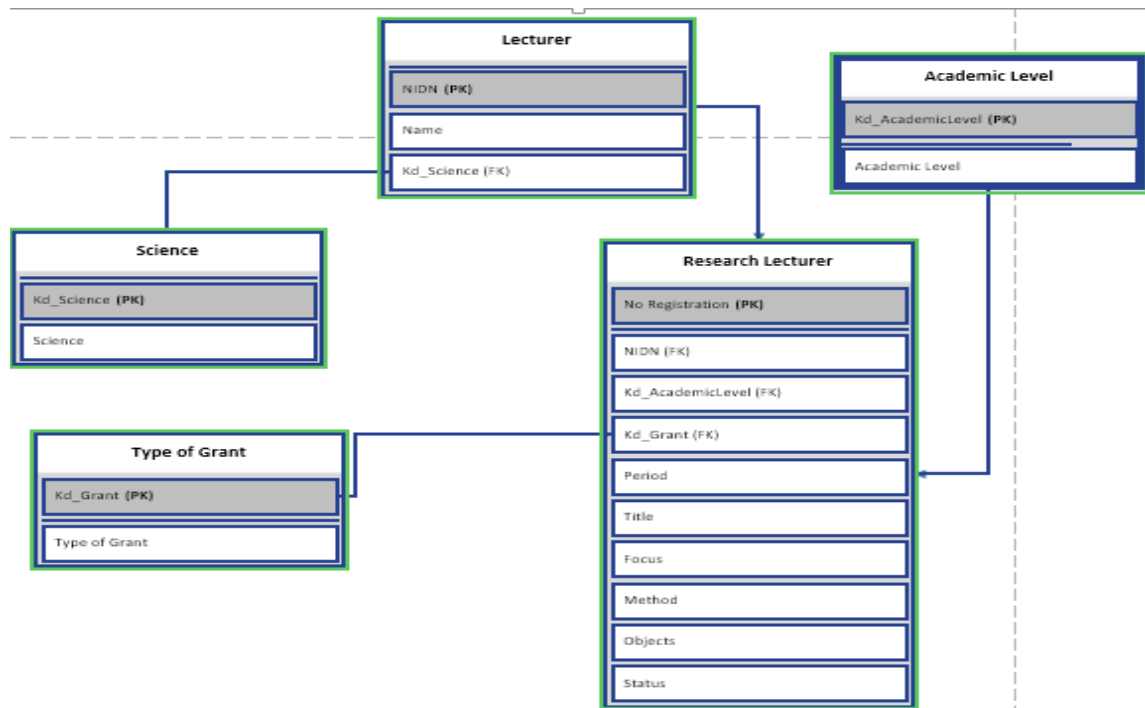


Figure 13. Relationships between tables

The core program logic design required to support the lecturer research data collection system can be seen in Figures 14, 15, 16, 17, 18, and 19

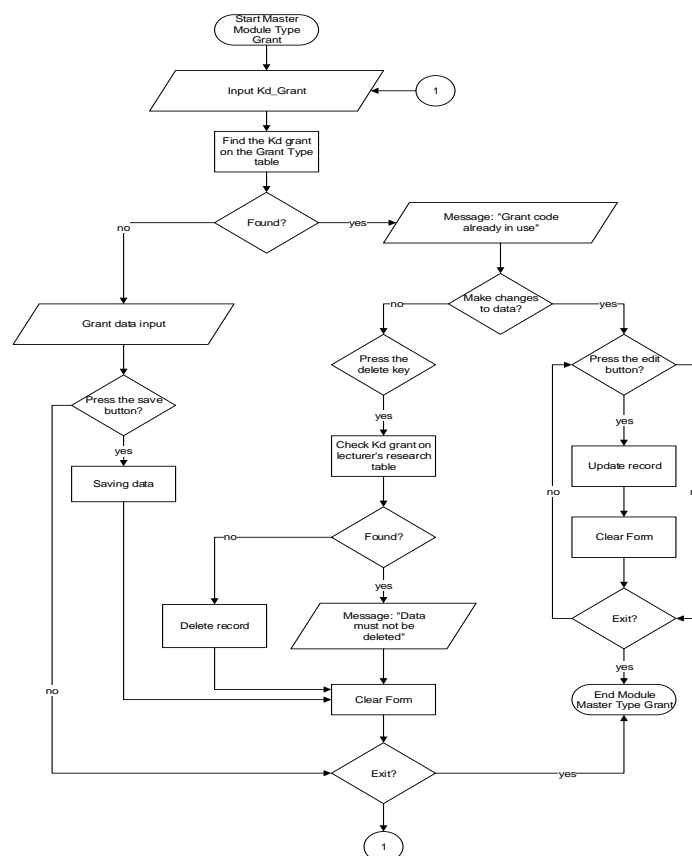


Figure 14. Logic of master module grant

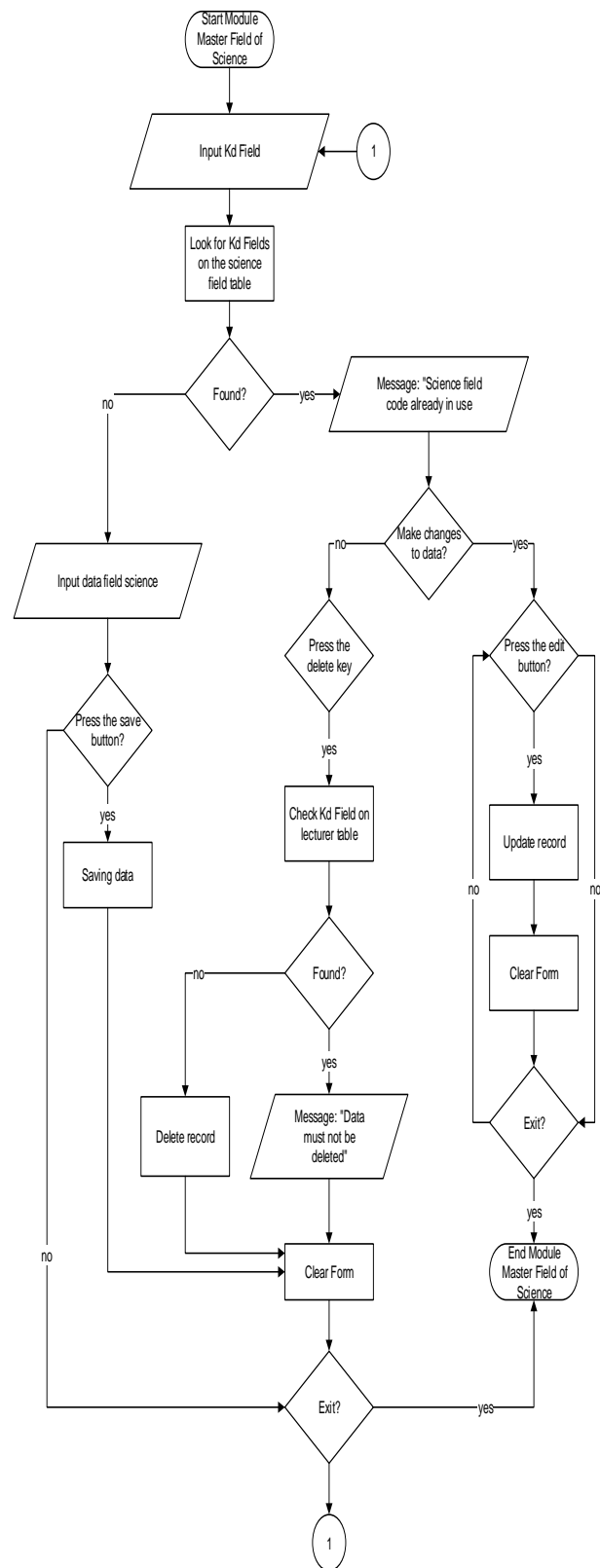


Figure 15. Logic module master field of science

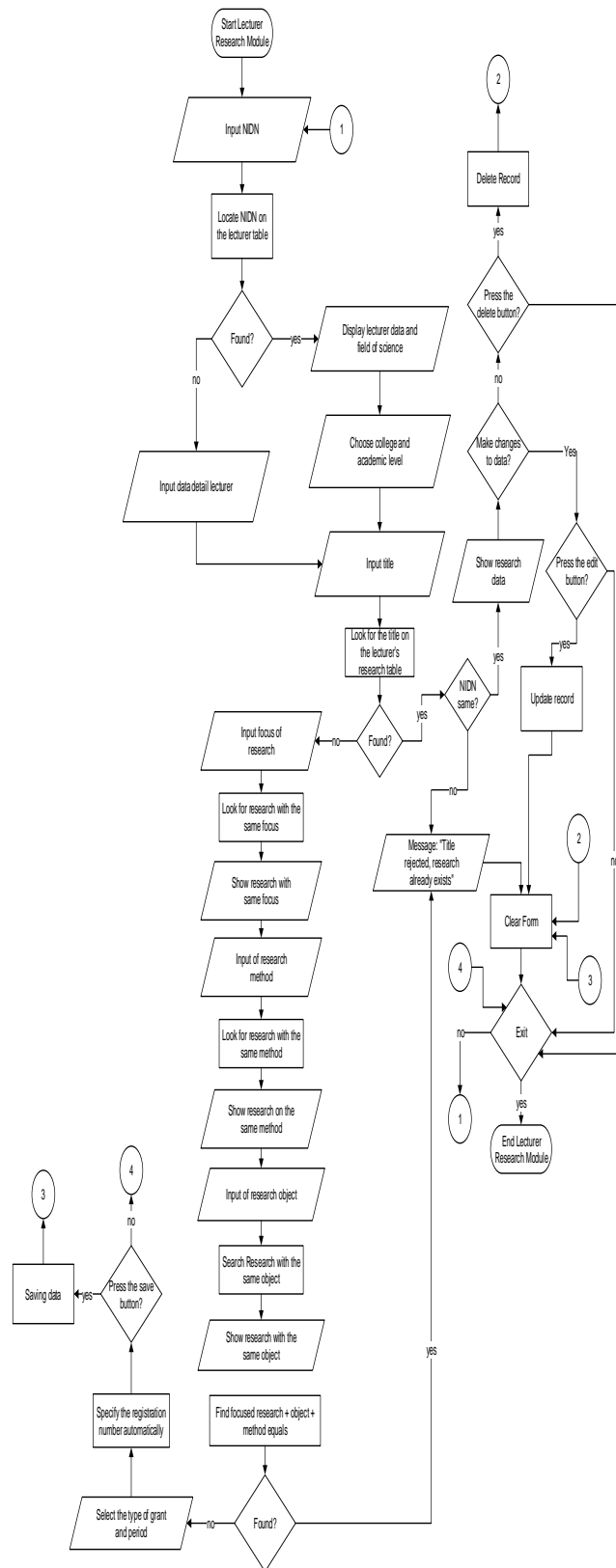


Figure 16. Logic of lecturer research logic module



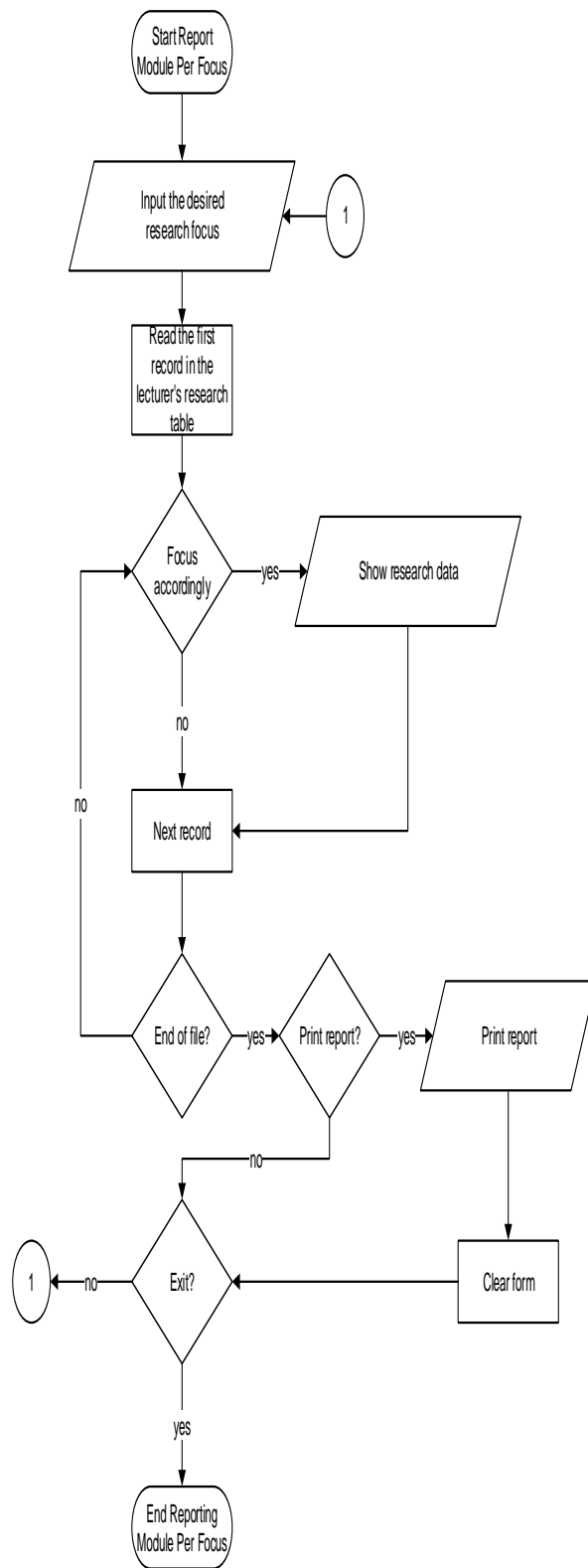


Figure 17. Logic of report module by research focus

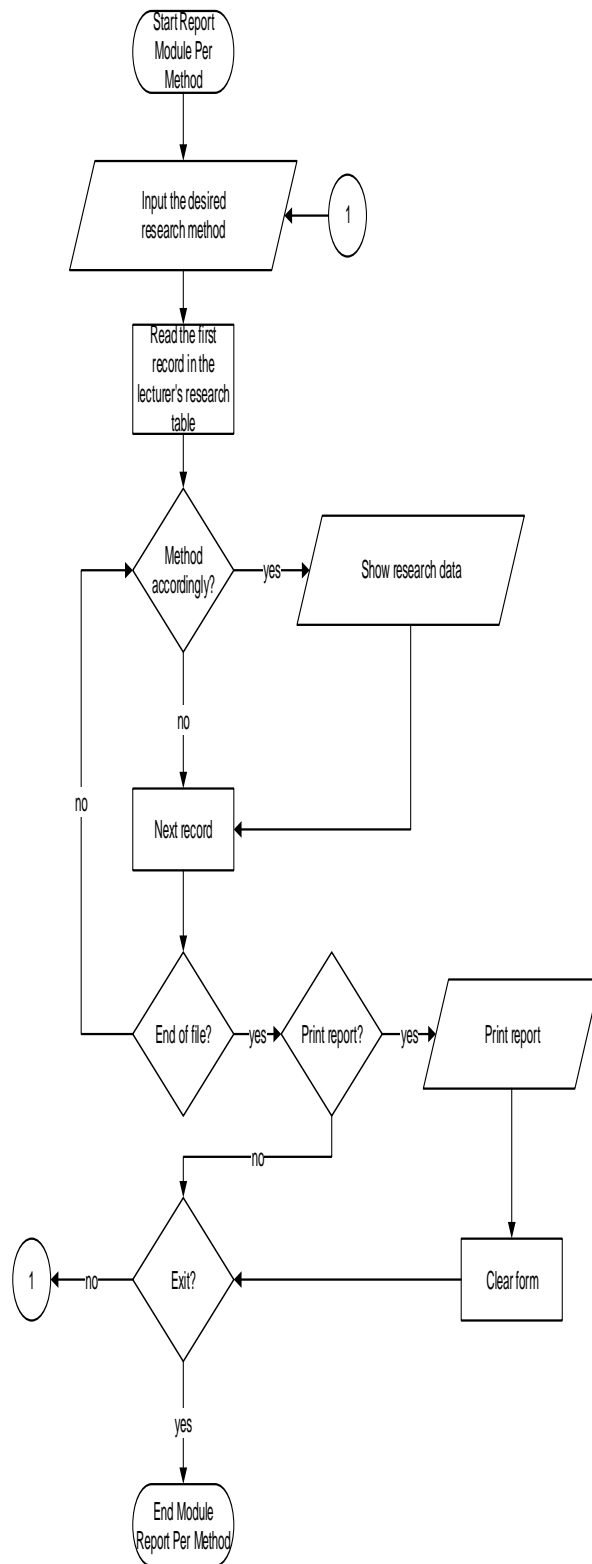


Figure 18. Logical report module per research method

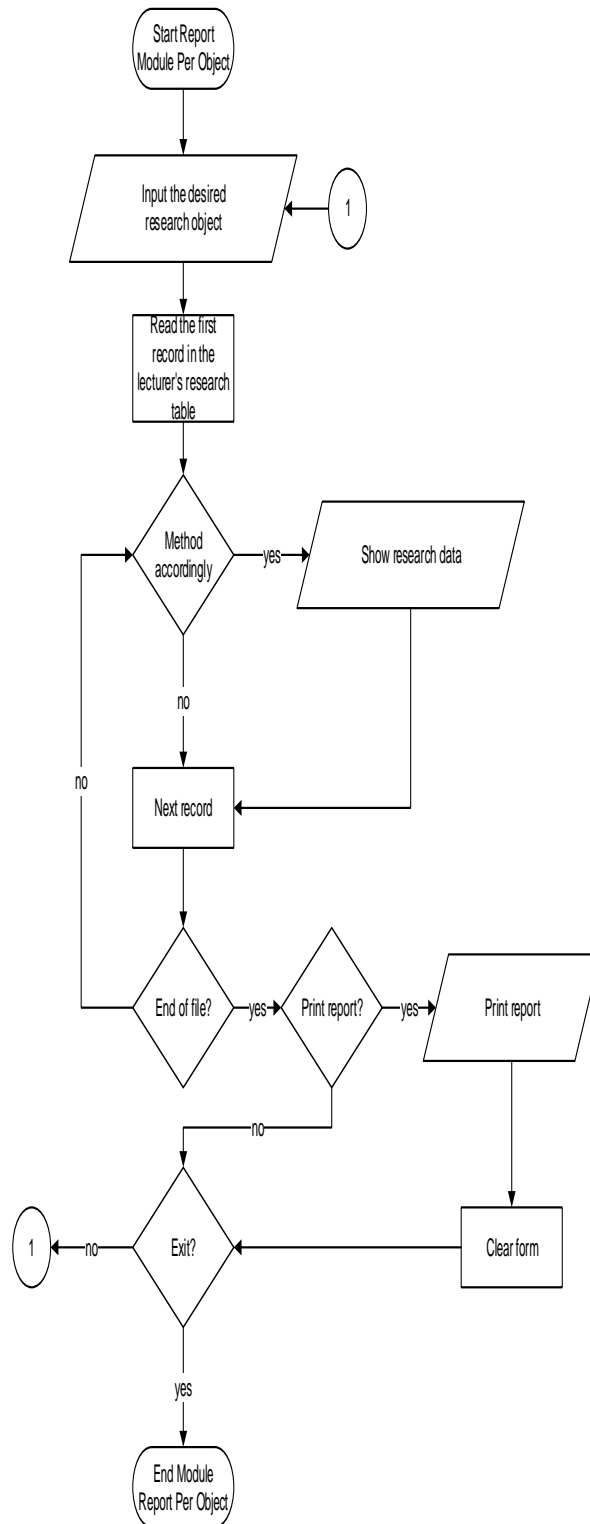


Figure 19. Logical report module per research object

## 5.0 CONCLUSION

### 5.1. Conclusion

The conclusion of this research is the development of lecturers research data collection system can help the data management of lecturer research so that it can be used to support the process and decision making related to it. This information system simplifies the process of checking and searching research data of lecturers with in the Institute of Informatics and Business Darmajaya Lampung, so it is also expected to prevent or minimize the practices of plagiarism and the emergence of the redundancy of the research title.

## 5.2. Suggestion

Systems can be developed not only in title checking or validation, but can check the level of content and methods used, and the conventional percentage or plagiarism

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